BOX PCT

IN THE UNITED STATES DESIGNATED/ELECTED OFFICE
OF THE UNITED STATES PATENT AND TRADEMARK OFFICE
UNDER THE PATENT COOPERATION TREATY – CHAPTER II

**INFORMATION DISCLOSURE STATEMENT**
**ACCOMPANYING THE FILING OF AN APPLICATION**

| | |
|---|---|
| APPLICANT(S): | NEUNEIER, R., et al. |
| ATTORNEY DOCKET NO: | P01,0020 |
| INTERNATIONAL APPLICATION NO: | PCT/DE99/02846 |
| INTERNATIONAL FILING DATE: | 8 SEP 1999 |
| INVENTION: | METHOD AND ARRANGEMENT FOR DETERMINING A SEQUENCE OF ACTIONS FOR A SYSTEM |

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Applicants hereby request that citation and examination of the following documents be made during the course of examination of the captioned application for United States Letters Patent:

Reference AA US 5608843 Mar. 4, 1997 BAIRD, III

Reference AQ NEUNEIER, R., et al.; "Enhancing Q-Learning for Optimal Asset Allocation"; Advances in Neural Information Processing Systems 10-Proceedings of the 1997 conference; 1997; pp. 936 – 942

Reference AR GUTJAHR, W.J.; "Failure Risk Estimation via Markov Software Usage Models"; Proceedings of the 15th International Conference on Computer Safety, Reliability and Security, SAFECOMP; 1996; 23 – 25 OCT 1996; pp. 183 – 192.

Reference AS AOKI, Y.; "Evaluation and Optimization of Environmental Planning Under the Risk-Aversion of Non-Repairable Damage"; Environmental Systems Planning Conference; 1 – 5 AUG 1977; pp. 847 – 852.

Reference AT SUTTON, R.S.; "Learning to Predict by the Methods of Temporal Differences"; Machine Learning 3; 1998; pp. 9 - 43.

Reference AU HEGER, M.; "Risk and Reinforcement Learning: Concepts and Dynamic Programming"; Zentrum für Kognitionswissenschaften, Universität of Bremen; 1995.

Reference AV BERTSEKAS, D.P.; Dynamic Programming and Optimal Control; Chapter 5; 1995.

## EXPLANATION OF RELEVANCE

Reference AA discloses a learning controller with an advantage updating algorithm.

Reference AQ discusses enhancing Q-learning for optimal asset allocation.

Reference AR discusses failure risk estimation via Markov software usage models.

Reference AS discusses evaluation and optimization of environmental planning under the risk-aversion of non-repairable damage.

Reference AT discusses learning to predict by the methods of temporal differences.

Reference AU discusses risk and reinforcement learning with respect to concepts and dynamic programming.

Reference AV discusses dynamic programming and optimal control.

None of the above-cited references discloses or suggests a method and arrangement for determining a sequence of actions for a system as disclosed and claimed in the present application.

A copy of each reference, together with a completed Form PTO-1449 and a copy of the International Search Report, are submitted herewith.

This Information Disclosure Statement is being submitted together with the original application papers, and is therefore in compliance with 37 CFR 1.97(b)(1). Thus, no fee payment is required.

All claims of this application are submitted to be patentable over the teachings of the cited references, taken singularly or in any reasonable combination. Hence, early and favorable consideration of the application is earnestly solicited.

Respectfully submitted,

Steven H. Noll

Steven H. Noll (Reg. No. 28,982)

SCHIFF, HARDIN & WAITE
Patent Department
6600 Sears Tower
233 South Wacker Drive
Chicago, IL 60606
Telephone: (312) 258-5790
Attorneys for Applicant(s)

Customer Number: 26574